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NEW AGRICULTURAL MACHINES GO INTO PRODUCTION; LYUBERTSY PLANT MECHANIZES PROCESSES

TURKMEN SSR GETS NEW MACHINES FOR IRRIGATION -- Ashkhabad, Turkmenskaya Iskra, 14 Feb 51

The February 1947 plenary session of the TsK VKP(b) emphasized the importance of the design, production, and use of new improved tractors and agricultural machines, and the need to mechanize the construction and cleaning of irrigation systems. The following is a summary of developments in the agricultural machinery received by the Turkmen SSR in the postwar period.

Last year, the DT-54 tractor was first used on a large scale for plowing in the Turkmen SSR. This tractor has a 54-horsepower diesel motor; it uses much less fuel and lubricant, is 30-40 percent more economical, and considerably more productive than the STZ-NATI tractor. The norm per shift is 4-5 hectares of deep plowing, but drivers on the Pobeda and Zarpchi kolkhozes regularly plow 6-8 hectares per shift.

The S-80 diesel tractor is even more productive, deep-plowing 7.9 hectares per shift as a norm, and 13-15 hectares per shift in skilled hands. In 1950, the tractor industry put out the new KDP-35 cultivating tractor, which will be widely used in summer cultivation of cotton plants. This diesel tractor is much more powerful than the Universal; it has five speeds, caterpillar tracks, and a special hydraulic system for suspension machines.

Cotton picking is one of the most labor-consuming and protracted processes in the yearly cycle of cotton growing. The mechanization of cotton picking is decisively significant at this time in view of the forthcoming expansion of the area under cotton cultivation. In 1950, republic MTS received several hundred new, highly productive SKhM-48 cotton pickers. Last summer, individual operators, even those inexperienced on this machine, picked 1½-2 tons of raw cotton a day, replacing 25-30 workers. Even though the demand for cotton-picking machines on the MTS has not been fully satisfied, their use in Uzbekistan last year saved 3 million man-days of labor.

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The decree of the Council of Ministers USSR on the conversion to the new system of irrigation allocated a significant number of excavating-leveling machines for 1950-1951 for cotton growing in the Turkmen SSR [redacted] Part of them have already arrived in the republic.

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The D-183 scraper, equipped with a scoop with a capacity of 2.25 cubic meters, is drawn by the DT-54 tractor. This machine levels hillocks, moves soil, and fills in hollows. Its average hourly productivity is 30-35 cubic meters of soil.

The D-157 bulldozer fills in old canals in the reconstruction of irrigation systems. Mounted on an S-80 tractor, this machine has an average productivity of 40 cubic meters per hour. It can also be used for moving soil in heavy leveling work.

The D-20 grader is used for leveling irrigated soil and the courses of irrigation ditches, and for grading soil after the scraper. It is drawn by the S-65 or S-80 tractor and has a productivity of 1.2-1.6 linear kilometers per hour. In grading after a scraper, this machine levels 0.86 hectare per hour in two passes.

The ET-121 multiscoop trench digger makes a ditch 0.5 meter wide and 1.2 meters deep, with vertical sides. It is designed to construct irrigation and small collecting and drainage systems. Maximum digging speed is 155 meters per hour or 700 cubic meters of soil per shift.

The new KPN suspension ditcher-banker makes the special banks necessary for presowing irrigation, and for dividing irrigated land up into plots. Mounted on a Universal tractor, the KPN, by means of its banking device, can make up to 5,000 linear meters of embankment per hour (on plowed land). The KPN also digs temporary irrigation ditches needed for the new irrigation system. The KPN is being used in all oblasts of the republic; and all kolkhozes in Sakar-Chaginskiy /probably Sagar-Chaginskiy/ Rayon are completing their assignments with the aid of the KPN machines they have received.

The KPU-2000 universal ditcher-banker has five attachments which enable it to do a variety of work. The two-bladed ditcher can cut a ditch 4.5 kilometers long in one hour. The banker can make a bank 4-4.5 kilometers long in one hour. A wide-cut cultivator turns over 3.2 hectares of land per hour. A special scoop takes soil off hillocks, moves it, fills in hollows, and levels off irrigation ditches.

SPEED UP OUTPUT OF MACHINES FOR SPRING SOWING -- Moscow, Moskovskaya Pravda, 10 Feb 51

The Ministry of Agricultural-Machine Building has increased the output of machines for spring sowing. The industry produced 74 percent more machines in January 1951 than in January 1950. Production of tractor plows and seeders increased 1½ times, the output of tractor cultivators was doubled, and many more harrows and other machines were built.

The industry now builds 11 types of seeders for grain, commercial crops, and grasses. Construction of improved plows has begun. Kolkhozes and sovkhozes will receive a big consignment of potato planters.

The farm machine production plan for the first quarter 1951 calls for an increase of 31.5 percent over the corresponding period in 1950.

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GOMEL' PLANT STARTS PRODUCING THRESHER -- Moscow, Voprosy Ekonomiki, No 9, Sep 50

The Gomel' Agricultural-Machine-Building Plant has begun producing the complex, highly productive MK-1100 thresher.

TURNS OUT TRACTOR BINDERS, MOWERS -- Riga, Sovetskaya Latviya, 6 Feb 51

The first group of tractor binders has come off the assembly line of the Lyubertsy Agricultural-Machine-Building Plant imeni Ukhtomskiy. In combination with a shallow plow and a sheaf-carrier (snoponos), this binder simultaneously reaps, binds the sheaves, gathers them in small ricks of 16-20 sheaves, and also shallow plows the soil. Plant designers are now working on a wide-cut tractor binder. Preparations are being made for the production of a mower to be attached to the U-2 tractor. The width of cut of this mower is 6 meters; it can mow 30-40 hectares of grass daily.

Moscow, Moskovskaya Pravda, 2 Feb 51

Since the Lyubertsy Plant did not fulfill its plan for the first half of 1950, a number of large-scale measures were taken to improve technology, expand socialist competition, and introduce true cost accounting in the production sections.

The casting shops, which supply parts to the machine-processing sections, play a major part in production; it was therefore necessary to increase the capacity of the gray-iron foundry. A mechanized conveyer section was organized for casting the largest parts, mower frames, thus eliminating one of the plant bottlenecks. An overhead conveyer was built and put into operation in 1½ months without interrupting the shop's output. The shake-out grids for castings were remodeled, ventilation in this section was improved, transportation of mower-frame castings to the cleaning section was mechanized, and new cleaning drums were built. As a result, output of castings increased 27 percent.

The pig-iron foundry was holding up the output of spare parts for agricultural machines because the capacity of the smelting section and the annealing tunnel furnaces was insufficient. More powerful blowers were installed on the cupola furnaces and the reverberatory furnaces were lengthened, thus increasing output of smelted metal. Efficient loading of conveying carts increased the outflow of annealed parts. An overhead conveyer was also installed in this foundry.

Cold upsetting of bolts and rivets on automatic machines has been adopted. A number of parts that were formerly machined on universal or nonautomatic (operatsionniy) machines are now made by automatic machines. The forge shop has adopted more than 120 dies that perform two or three operations simultaneously, and assembly lines are being organized for processing heavy, bulky parts.

Electric-spark machining of tools has been adopted, increasing their durability and speeding up metal cutting. To date, 157 machine tools have been converted to high-speed cutting.

Cost accounting in this plant is based entirely on computed mean-progressive norms. All shops were put on a cost-accounting basis starting 1 October.

The 1951 plan has been significantly altered. In 1951 the output of horse-drawn machines (mowers, reapers) will be decreased, and the output of tractor-drawn mowers will be increased 2-3 times. The 1951 plan also provides for the construction of 4,000 tractor-drawn reapers, of binders necessary for the harvest campaign for Moscow Oblast kolkhozes, and of the new KN-6 three-beam suspension mower (tractor drawn). The change in the plan required important preparations for production, equipping and replanning the shops, and redistributing and retraining workers. Part of this work has already been completed.

One of the fundamental problems the plant faces in 1951 is to achieve rhythmical work patterns based on a daily schedule. Seven machines are in large-series production, and nine will be in production at the beginning of the third quarter. As many as 2,500-3,000 items have to be manufactured simultaneously, and it is difficult to attain rhythmic production under these conditions. Late delivery of basic and auxiliary materials, chiefly metal, from the plants of the Ministry of Ferrous Metallurgy /now Ministry of Metallurgical Industry/ makes it impossible to build up the minimum stockpile of metals and other materials necessary for normal production.

Poor-quality materials from enterprises of the Ministry of Timber Industry also prevent the plant from achieving greater economy. Some of the blame for the lack of rhythmical work naturally rests with the plant workers. Here the chief obstacle is the lack of sufficient stockpiles of parts, which makes it necessary to put almost the whole parts list into production at the beginning of the month. Another obstacle is the lack of discipline of individual shop leaders, who put their own shop interests above those of the state.

The fight to conserve all types of materials, tools, and electric power, the most important task of the plant's personnel, will be waged by cost-accounting methods.

Many processes in the foundry and the machine assembly shops have been mechanized in the postwar period, and some work has been done toward mechanizing supply and transport. However, measures to reduce labor consumption which remain to be done include mechanization of the conveying, cleaning, loading, and unloading of castings for annealing in the pig-iron shop, organization of assembly lines in the forge and other shops, and mechanization of intra- and intershop conveyance of parts and units.

Waste must still be guarded against, especially in the foundry, where it reaches 9-12 percent.

CHISEL-CULTIVATOR ADAPTED FOR LEVELING WORK -- Ashkhabad, Turkmenskaya Iskra, 16 Jan 51

The Council of Ministers USSR, in its decree on the new irrigation system, gave special attention to leveling work on irrigation land. Output of a large number of special machines and implements for this purpose has been provided for.

However, since the kolkhozes have not yet received enough machines for leveling work, the Deynau, Oktyabr', Chardzousk, Farab, and other MTS have built and tried out an attachment, at the suggestion of the Bukhara experimental station, which enables the K-E chisel-cultivator to replace a grader. This attachment is a blade 3,100 millimeters long, 150 millimeters wide, and 6-7 millimeters thick, mounted on a plank 280 millimeters wide. The cultivating elements are left as they are on the front plow-beam and the blade is

attached to the rear plow-beam. At MTS where no plowshare strips or suitable-sized pieces of iron are available, the blade can be forged from the wheel rim of a discarded U-1 tractor. This can be done easily even in a kolkhoz smithy.

When drawn by an STZ tractor, this chisel-leveler can grade up to 3 hectares of land in 10 hours, in two passes. It can level small hillocks and small irrigating systems, and is invaluable on kolkhozes where there are few draft animals.

The construction of these attachments has been organized on all MTS by the Chardzousk Oblast Administration of Cotton Growing.

BUILD MORE TRACTORS, FARM MACHINES IN 1950 -- Moscow, Trud, 28 Jan 51

In the past year, USSR tractor production increased 23 percent, grain combines 59 percent, tractor-drawn plows 47 percent, tractor-drawn seeders 85 percent, and tractor-drawn cultivators 67 percent over 1949.

MOBILE ELECTRIC-PLOWING SUBSTATIONS GO INTO PRODUCTION -- Yerevan, Kommunist, 8 Feb 51

Scientific workers of the Electrical Engineering Laboratories, Academy of Sciences Armenian SSR, in response to a request from the Yerevan Electric-Machine-Building Plant, conducted research projects with a view toward putting into production mobile substations for electric plowing. Special study was devoted to an original steering mechanism and to a means of shielding the electric plowing unit, both developed by the plant's design bureau. A number of improvements were introduced on the basis of these experiments.

The plant has already begun the production of the first series of mobile substations. They will be tested on the electrified MTS of the Ministry of Agriculture USSR.

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